

Depth and aerial extent of all usable fresh and potable water (USDW) underlying the area proposed for exemption

The following formations underlie the exemption area; associated tops and bottoms from Brinkerhoff 3A well.

Wind River Basin hydrostratigraphy^B							
Formation	Top feet (MD)	Bottom feet (MD)	Description	Hydrogeologic Units^B	Min (TDS)^C	Median (TDS)^C	Max (TDS)^C
Frontier	3005	3731	Oil, gas, water	Minor aquifer with basal confining unit ^B	3,841	5,982	11,536
Muddy	4248	4306	Oil, gas, water	Minor aquifer within major confining units ^B	4,589	8,370	10,370
Cloverly (Dakota and Lakota)	4466	4783	Oil, gas, water	Minor aquifer ^B	4,543	6,143	8,347
Nugget	5421	5488	Oil, gas, water	Major sandstone aquifer ^B	4,936	26,454	39,294
Crow Mountain (Curtis)	5700	5791	Oil, gas, water	Marginal aquifer ^B	9,101	12,300	41,433
Phosphoria ^A	6756	7011	Oil, gas, water	Identified as confining unit and minor aquifer ^B	2,500	13,023	31,429
Tensleep ^A	7011	7306	Oil, gas, water	Identified as major limestone aquifer ^B	1,828	2,806	23,665
Amsden ^A	7306	7624	Oil, gas, water	Confining unit and marginal aquifer ^B	6,100 ^D	6,100 ^D	6,100 ^D
Madison ^A	7624	-	Water	Identified as major limestone aquifer ^B	1,960	3,279	10,316
Madison Fm is deepest penetration in Steamboat Butte Field (outside of AOR)							

^A Projected tops and bottoms from calculate from gross thickness of intervals encountered in Tribal E 26 (NENW Sec. 5 T3N R1W)

^B Hydrogeological information was gathered from Chapter 6 'WBRB Hydrogeology and Groundwater Resources' prepared by Paul Taucher, Keith Clarey, David Copeland, Melissa Thompson, Brett Worman and Nikolaus Gribb. Chapter 6 is a portion of the electronic version, created on October 3, 2012, of the *Wind/Bighorn River Basin Water Plan Update – Groundwater Study, Level I (2008–2011)* prepared under contract for the Wyoming Water Development Commission (WWDC)³ by the Wyoming State Geological Survey (WSGS)¹, United States Geological Survey (USGS)², and Water Resources Data System (WRDS), in cooperation with the Wyoming State Engineer's Office (WSEO) and the Wyoming Oil and Gas Conservation Commission (WOGCC).

¹Wyoming State Geological Survey, P.O. Box 1347, Laramie, Wyoming 82073-1347

²U.S. Geological Survey, Wyoming Water Science Center, 521 Progress Circle, Suite 6, Cheyenne, Wyoming 82007

³Wyoming Water Development Commission, 6920 Yellowtail Road, Cheyenne, Wyoming 82002

⁴Energy Compliance LLC, 2302 Nighthawk Drive, Laramie, Wyoming 82072

^C Water quality data gathered from "Produced Waters Database" at the USGS Geology, Energy & Minerals Science Center for Steamboat Butte Field and offset Pilot Butte Field

^D Only one sample available for the Amsden Formation in Steamboat Butte Field